Cooley

By ECFS and Electronic Mail

November 19, 2019

Marlene H. Dortch, Esq.
Secretary
Federal Communications Commission
445 12th St., S.W.
Washington, DC 20554

Re: *Ex Parte* Communication in GN Docket No. 18-122: *Expanding Flexible Use of the 3.7 GHz to 4.2 GHz Band*

Dear Ms. Dortch:

On behalf of The Church of Jesus Christ of Latter-day Saints (the "Church"), we respectfully submit these additional comments in the above-captioned matter. While we appreciate the Commission's desire to clear the C-Band soon, incumbent users are not adequately protected by the proposals put forth so far. When the Commission releases its Order on C-Band, that Order should first establish as a bedrock principle that incumbent users must be fully reimbursed. Second, the Order must direct the Bureaus to seek further comment on a transition plan so that all parties can agree on what and how expenses will be reimbursed. Earth station operators with unique transition costs, such as the Church, must be fully compensated.

Introduction

The Church is on record as a strong supporter of reallocating C-Band spectrum for wireless uses that will benefit consumers. At the same time, the Church is concerned that there are no transition plans in the record that are adequate to accommodate the needs of C-Band users like the Church that will be required to utilize a smaller C-Band or transition to new distribution technologies.

The Church has strongly urged the Commission to (1) give current C-Band users maximum flexibility for structuring their post-auction operations, including options of staying in the remaining C-Band or vacating the C-Band for other feasible alternatives, including fiber or other satellite bands; and (2) ensure that current C-Band users are fully reimbursed for all costs of modifying their operations to accommodate this transition. Unfortunately, plans such as the CBA Transition Plan do not provide adequate guarantees to C-Band users on either of these issues. [1]

[1] *See, e.g.*, Letter from C-Band Alliance to Marlene H. Dortch, Secretary, FCC, GN Docket No. 18-122 (filed Oct. 28, 2019) ("CBA Proposal"); *See also* Letter from C-Band Alliance to

The Church requests that the Commission adopt strong rules to ensure that current C-Band users have both the flexibility they need to continue providing the important programming services they provide today and the certainty that they will not suffer economic harm for the benefit of the new wireless users of C-Band spectrum. To ensure that current C-Band users are protected, any Commission decision must require that all transition costs, both direct and indirect, be covered. In addition to adopting strong reimbursement rules, the Commission should also require the Bureaus to seek further notice and comment on transition and reimbursement issues so that all parties can agree on a detailed transition plan.

Existing C-Band Users Must Have Flexibility to Make Their Own Technology Choices

Flexibility and full reimbursement are the absolute minimum principles necessary to ensure that this is a fair process for all involved and that service to the public will remain robust. Some proposals, however, do not permit earth station operators like the Church to make their own choices about post-auction operations. Instead, they propose to repack current C-Band users onto a smaller swath of spectrum by relying on compression and filtering technology. For example, CBA would cover earth station operators' costs for alternative technology choices and upgrades only "if deemed necessary by the CBA" or if CBA has identified the customer for an upgrade.[2] Their proposal does not, however, include any guidelines for how CBA would decide which customers will be eligible for an upgrade. This would leave earth station operators like the Church in limbo, allowing the CBA to decide an earth station operator's fate based on what is best for the CBA, which may not be workable or the best option for service to the general public. Further, the CBA Proposal would cover only a very small subset of potential end-user costs. For example, extra labor and equipment costs for C-Band users such as the Church who lack technical staff and supplies seemingly would not be covered.[3] Rather than allowing CBA or any other outside party to dictate the process, the Commission should adopt rules that empower C-Band operators with the flexibility to adopt alternative technologies where appropriate and feasible.

It is undisputed that reorganizing the C-Band will be a complex and costly process that will displace incumbent C-Band users. To maintain service to the public, incumbents will be required to adopt some type of solution or combination of solutions to respond to the reduction in available C-Band spectrum. For some users, the solution might be as simple as installing a filter,

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Marlene H. Dortch, Secretary, FCC, GN Docket No. 18-122 (filed Nov. 8, 2019) ("CBA Transition Plan").

[2] CBA Proposal at 1-2.

[3] *See, e.g.,* Letter from The Church of Jesus Christ of Latter-day Saints to Marlene H. Dortch, Secretary, FCC, GN Docket No. 18-122 (filed July 9, 2019) at 8-9.

but for most it will likely include much more complicated steps such as installing compression technologies, changing transponders, updating systems, repointing downlink antennae, and, in some cases, transitioning to another communications method. Even parties intending to rely on adding new filters may face additional and unexpected expenses, as many C-Band dishes are old and servicing them may not be possible. Because any option will require time and money, the Commission should recognize that staying on C-Band may not be the best or most efficient option for all incumbents. Whereas the CBA Proposal and the CBA Transition Plan focus on how to accommodate all C-Band users on a smaller band of spectrum primarily through the use of filters and compression technology, it is not in the public's interest to limit C-Band users to this "one-size-fits-all" approach." Instead, C-Band users should be permitted to explore alternatives that would result in them vacating the band through the use or installation of fiber or by transitioning to a different spectrum band.

The Church's technology choices will be informed by their constant need to grow their distribution network. As new meetinghouses are opened, or as others move to new locations or change their facilities, the Church's distribution network must also change. Accordingly, the Church cannot be locked into a static C-Band network with no ability to move or install new equipment for new locations. In addition, the Church has a very small technical staff and its many C-Band earth station locations are staffed only by volunteer Church members. While the Church is willing to endure the disruption the C-Band transition will cause, it should not have to expend donated resources to transition more than once. Accordingly, the Church may determine that it is best served by leaving the C-Band altogether.

The choice of what technologies to use going forward, and whether to stay on C-Band at all, should be in the hands of displaced C-Band incumbents like the Church. An Order that empowers operators to decide their own future will make this process easier and is more likely to result in efficient, long-term solutions without adding undue expense.

A Flexible Reimbursement Program Best Fits the Public Interest

The voluntary program proposed by the Church would promote several important public interests. First, allowing C-Band users to control their own transition would maximize the number of users that vacate the C-Band entirely for solutions like fiber or other satellite bands. This would lead to a less crowded C-Band, which could create space for current incumbents to grow and also could lead to an easier path to freeing up additional C-Band spectrum in the future. Indeed, removing the Church's 3,476 locations from the C-Band would significantly reduce the burden on the post-auction C-Band in many parts of the country.

Second, if current C-Band users vacate the band, the transition of C-Band spectrum to wireless use will be quicker and more effective. Fewer C-Band users means a reduction in the total

number of earth stations and therefore fewer pockets where 5G coverage is restricted due to proximity to C-Band downlinks.

Third, to the extent C-Band users choose to migrate their C-Band use to fiber, such a transition could lead to new deployment of fiber to currently underserved areas. The Commission should take advantage of this opportunity to further its goal of extending fiber into rural and unserved areas, helping to advance the Commission's longstanding goal of closing the digital divide.[4]

Fourth, ensuring flexibility will promote a faster, frictionless transition to wireless operations in the current C-Band. C-Band incumbents will move more quickly because they would be allowed to move forward with a solution of their own choosing that maximizes the benefits to end users rather than a solution that was forced on them and may not lead to an adequate replacement service. It is also less susceptible to potential litigation delays because incumbents would be permitted to select the option that best protects their interests.

Finally, offering C-Band incumbents flexibility to vacate the band leads to fewer C-Band users, which would simplify any future C-Band restructuring. The need for additional wireless spectrum is not going to stop with the current C-Band proceeding. And members of the Commission have already stated their belief that additional wireless spectrum may be available in the future from the remaining C-Band.[5] The more C-Band users the Commission can move off the band now, the fewer it will need to move later. If individual users determine that now is the time to permanently vacate the C-Band, the Commission should encourage that activity.

All Incumbent Transition Costs Should Be Reimbursed

The CBA has acknowledged that clearing more than the 200 MHz it originally proposed will be "extremely expensive" and "much more intrusive" with more consequences for current C-Band

[4] In cases where it is more expensive to extend fiber to earth station receivers, the most likely reason for the added costs is that the receiver is located in an underserved area that lacks a fiber connection. Using this proceeding as an opportunity to extend fiber to such areas – by reimbursing earth station receivers for the cost – will be a huge benefit to people in underserved areas. A new fiber connection to an earth station receiver can form the backbone for broadband service to homes, schools, libraries, businesses, and other community facilities in these areas.

[5] For example, Commissioner O'Rielly has indicated that repurposing as much as 400 of the total 500 MHz in the short-term would be appropriate. *See* Monica Alleven, *FCC's O'Rielly suggests freeing up 200-300 megahertz of C-Band spectrum*, FierceWireless, Apr. 19, 2018 (found at www.fiercewireless.com).

users.[6] The massive expenses of this intrusive operation should not fall on C-Band users or those they serve. The Church recognizes and supports the Commission's goal to adopt rules that clear the spectrum quickly to serve the public's interest in receiving new 5G wireless services. But frankly, those services will be offered for profit by wireless carriers that will reap enormous financial rewards from their use of the C-Band spectrum. While the Church favors this result, it should not be forced to subsidize it.

Instead, the Commission's Order establishing the future of the C-Band should include a mechanism for dedicating a portion of the auction proceeds to ensure that current users are reimbursed for all of their reasonable relocation expenses.[7] These relocation expenses should include, at C-Band incumbents' option, any move to a feasible alternative distribution method. Accordingly, in its Order adopting rules for the auction and transition, the Commission should make clear that earth station operators may select a transition technology that makes the most sense for that operator and adopt a "costs reasonably incurred" standard that will reimburse earth station operators for all transition costs, including costs associated with transitioning to alternative technologies selected by the operator.

The Commission has established reimbursement standards before, and it should do so again with regard to the C-Band reallocation. For example, the Commission could adopt the reimbursement standard from the recent broadcast incentive auction, where the Commission reimbursed "costs reasonably incurred," interpreted to include all "costs that are reasonable to provide facilities comparable to those that a [station] had prior to the auction."[8] No matter the standard the Commission sets, however, reimbursement must include "hard" expenses, such as equipment upgrades and new infrastructure as well as "soft" expenses such as administrative and coordination costs. For incumbents, such as the Church, that operate extensive networks and rely primarily on volunteers, even the seemingly simplest transition option will involve multiple steps and extensive coordination costs. These costs should not be borne by the Church and its members.

As with the incentive auction, the Commission should require earth station operators to take reasonable steps to mitigate costs but, to be made whole, operators should not be forced to incur

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[6] Transcript of Panel 1: FCC and Congressional State of Play at 8, *C-band Conference Policy and Legal Merits: Is a Court Fight Inevitable?*, Capitol Forum Conference (Oct. 8, 2019).

[7] Some parties have suggested incentive payments in addition to cost reimbursement. *See, e.g.,* Reply Comments of Trinity Broadcasting Network, FCC, GN Docket 18-122 (filed Aug. 14, 2019) at 4-6. The Church's position is that full reimbursement obviates the need for additional incentive payments.

[8] Expanding the Economic and Innovation Opportunities of Spectrum Through Incentive Auctions, *Report and Order*, GN Docket 12-268, 29 FCC Rcd 6567, 6822 (2014).

additional, non-reimbursable expenses. For example, the Commission should not adopt a "Minimum Necessary Cost Standard" as it has in some other contexts because this approach will conflict with the Commission's stated goal of protecting incumbent earth station users. Rather, the Commission should require reimbursement of all reasonable costs necessary for an earth station operator to either stay on the C-Band or move to an alternative transmission mode.

An Order requiring reimbursement of all costs reasonably incurred is not unique to the 2014 incentive auction. As outlined by National Public Radio ("NPR") in its *ex parte* letter dated August 28, there have been "multiple instances over more than two decades in which [the Commission] required reimbursement of relocated spectrum incumbents."[9] Indeed, NPR has catalogued a long history of requiring emerging technology providers seeking spectrum access to make incumbents whole by paying relocation costs.[10] The Church agrees with NPR's conclusion that it is "beyond reasonable dispute that receive-only earth stations forced to relocate to accommodate new terrestrial broadband services in the mid-band spectrum can and should be held harmless, including with respect to the increased costs of operation using alternative communications facilities."[11]

The Church acknowledges that alternative technologies may cost more than filter installation in some areas. In many cases, however, the difference between the cost of installing filters and compression tools versus the cost of switching from C-Band to other technologies will not be significant. Even if the additional cost is significant, it should be balanced against the benefits of removing incumbents from the C-Band permanently. For example, the public benefits of increased fiber deployment would far outstrip the additional cost of laying fiber to underserved areas as part of the C-Band transition. In short, even if transitioning earth stations to alternative technologies is more expensive in some locations in the near term, operator flexibility will save expenses down the road and maximize the overall value to the public, including the value of the time and effort being dedicated to the current proceeding. Such expenses are reasonably necessary to a smooth and orderly transition.

The Commission Must Oversee the Reimbursement Process

The Commission should oversee, or direct the appointment of a third-party administrator to oversee, the distribution of the reimbursement funds. This party would ensure that C-Band users have the flexibility to choose their transition technology. The decision of which incumbent

[9] Letter from National Public Radio ("NPR") to Marlene H. Dortch, Secretary, FCC, GN Docket No. 18-122 (filed Aug. 28, 2019).

[10] *Id.* at 1-3.

[11] *Id.* at 3.

receives which technology should not be left to the discretion of any private party or auction administrator.

Various parties estimate that the auction to reallocate the C-Band will generate billions of dollars. Those proceeds will be allocated to cover the cost of the auction, to reimburse current C-Band incumbents, and to pay the public treasury and/or the auction administrator. With so much money at stake, it is critical that the Commission oversee, or appoint a fund administrator to oversee, the distribution process, including reimbursement of earth station operator transition costs as it has done in the past.[12] Careful oversight by the Commission or appointment of a third party administrator is even more important in the present, C-Band restructure where there are significantly more parties and funds.

To ensure fairness and accountability and to avoid any conflict of interest, a party that will receive any funds from auction proceeds—whether through reimbursement for incurred costs, receipt of funds remaining after reimbursement claims are paid, or otherwise—cannot also have the unfettered authority to decide what portion of that amount should be given to others. At the very least, the Commission or transition/auction administrator should adopt a process where stations receive an allocation of funds based on an average or estimated cost, and allow earth station operators to use that amount to offset the cost of transitioning to an alternative technology.[13]

The Commission Should Seek Further Comment on Any Transition Plan

During *ex parte* meetings in August and October, Church representatives agreed to assist the Commission by gathering estimates of its costs to install filters or transition to alternative technologies. Doing so has proven challenging, as each of the Church's 3,476 C-Band downlinks is uniquely situated. Accordingly, because the record on costs is inadequate at this time, the Church agrees with AT&T that before a transition plan is adopted, it must be fully

[12] *See, e.g.,* Expanding the Economic and Innovation Opportunities of Spectrum Through Incentive Auctions, *Report and Order*, GN Docket 12-268, 29 FCC Rcd 6567, 6819 (2014) (directing the Media Bureau to engage a third-party contractor to assist in administering the reimbursement fund); Improving Public Safety Communications in the 800 MHz Band, *Report and Order, Fifth Report and Order, Fourth Memorandum Opinion and Order, and* Order, WT Docket 02-55, 19 FCC Rcd 14, 15,070 (2004) (providing that the relocation process would be managed by an independent Transition Administrator subject to Commission oversight).

[13] The development of cost estimates could follow a process similar to the process used to determine the initial allocation of actual costs as part of the 2014 incentive auction. Expanding the Economic and Innovation Opportunities of Spectrum Through Incentive Auctions, *Report and Order*, GN Docket 12-268, 29 FCC Rcd. 6567, 6815 (2014).

vetted through a notice and comment proceeding.[14] This will allow all parties to review, on the record, the various costs that may arise and determine how they should be reimbursed.

For example, the Church has preliminarily identified different categories of costs such as hard costs, soft costs, and operational costs, all of which should be reimbursed. Hard costs would include equipment and onsite labor to install filters or replace equipment at each of the Church's 3,476 locations. While the Church does not have exact cost figures, it has obtained estimates from vendors capable of doing the work. For hard costs, these estimates show that the per-site cost to install new C-Band filters, move to Ku-band, or move to fiber are roughly similar (excluding disposal costs for old equipment) for sites where each solution is technically feasible. There will, however, be significant cost variability at each site for the different technology choices due to circumstances beyond the Church's control (such as the lack of nearby fiber trunk lines). So, for example, the additional costs of switching to fiber at a site with no nearby fiber trunk line would be substantial. Nonetheless, the similar base cost of all available options argues for providing C-Band users like the Church with the flexibility needed to determine the best solution for each location.

Indeed, if the Church is not permitted to select the best solution for each location, costs could skyrocket. For example, as the CBA Transition Plan notes, "[w]hether or not a technology upgrade is required, a large number of current customer transmissions will likely need to be moved to a new frequency in the upper portion of the C-band," which will require earth station operators to "retune or repoint their antennas"[15] After antennas are retuned or repointed, filters must be installed on each antenna.[16] Some earth stations will be required to change the frequency on their receiver.[17] Some customers will need to move to transponders on a different polarization, which will require earth station operators "to rotate their feed to lock into the new frequency range and polarization," and which likely will also require a frequency change.[18] Some earth station operators will be required to change the satellite from which they receive their feed, which will require the earth station "to re-point their antenna to an entirely new orbital position."[19] In addition, "[t]here will be cases where an [earth station operator] needs a new antenna to point to a satellite orbital location to which the End User has no antenna pointed or

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[14] Letter from Michael P. Goggin, AT&T, to Marlene H. Dortch, FCC, GN Docket No. 18-122 (filed November 1, 2019) (AT&T Letter") at 5.

[15] CBA Transition Plan at 5.

[16] *Id.* at 5; CBA Transition Plan, Attachment A at 1.

[17] CBA Transition Plan, Attachment A at 1.

[18] *Id.*

[19] *Id.*

has old equipment that cannot feasibly be repointed."[20] All of these scenarios would add additional costs.

For the Church's network, the proposed work will also require extensive coordination and support to grant site access, provide technical field support, manage and coordinate the project, and provide engineering support. Some of the work may be performed on a single site visit, but numerous contingencies could arise to require multiple visits—an old or a-typical antenna, old receivers, need for additional parts, a technician that can't find the building, etc.—that will further increase costs.[21]

On soft costs, project management will be a significant cost for the Church. Transitioning all 3,476 antenna in the Church's network will be a major undertaking with multiple layers of coordination. Someone will need to oversee the project. The work will include coordinating site visits with technicians, Church property managers, and possibly local Church members; keeping track of project progress; keeping track of which locations are on which frequency and which technology; coordinating technical support and site visits from technical personnel; and coordinating technical support if local volunteer members are having problems with the transitioned antenna. The project will also involve managing costs and invoices, setting up invoice and reimbursement processes, keeping track of expenses, and shepherding expenses through any reimbursement process.

Other soft costs include additional travel expenses, administrative costs, accounting costs, and legal costs. For example, any transition solution, whether filters, new antennas, or a terrestrial solution, will involve administrative costs such as hiring and training new employees, changing equipment documentation, training tech support personnel on the new or revised system, updating instructions that will be used by volunteers at each house of worship, translation services for instructions to volunteers, and possible translation services related to documentation.

Finally, as discussed previously, the Church agrees with NPR that higher ongoing operating costs also must be covered. Ongoing operating costs could include subscription costs, licensing costs, cloud management, servers, headend equipment, and management tools. Subscription costs include monthly satellite or terrestrial subscription (fiber) fees and cloud service fees. The

[20] *Id.* at 9.

[21] As outlined in prior filings, the Church does not have full-time, on-site staff at its receiver locations, so granting access to each site will require coordination through a paid property manager that oversees building maintenance. Ideally, as much work as possible will be performed in a single visit, but in many cases the work likely will require multiple visits. A conservative estimate that assumes a second visit will be required in only one out of every six or seven cases puts the building access cost at nearly $2 million. This is a cost that the Church will incur regardless of which solution it adopts.

increased costs of C-Band satellite bandwidth is unknown, but is likely to increase because the restructure will reduce the supply of bandwidth available. More information is needed before the Church can realistically anticipate or estimate other operating costs.

Conclusion

For the reasons stated herein, the Church strongly encourages the Commission to adopt rules in this proceeding that will give existing C-Band users the freedom to determine how they will provide services in the post-auction environment and ensure that their costs of replicating current service will be fully reimbursed.

Respectfully submitted,

/s/

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